

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 72

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HELMUT KIPPHAN, GERHARD LOFFLER,  
GUIDO KELLER, and HANS OTT

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Appeal No.96-0992  
Application 08/293,936<sup>1</sup>

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HEARD: December 10, 1998

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Before CALVERT, STAAB, and STAAB, Administrative Patent Judges.

STAAB, Administrative Patent Judge.

#### DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 27 through 52. Claims 21 through 26, the only other

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<sup>1</sup> Application for patent filed August 22, 1994. According to appellants, the application is a continuation of Application 07/915,751, filed July 21, 1992; which is a continuation of Application 06/939,966, filed December 10, 1986.

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claims pending in the application, stand withdrawn from further consideration under 37 CFR § 1.142(b) as being drawn to a non-elected invention.

By way of background, this is the second appeal of the subject matter claimed in the appealed claims. In Appeal No. 90-2059 in grandparent application SN 06/939,966, a merits panel of this Board affirmed the examiner's rejection of claims 27 through 51 under 35 U.S.C. § 112, first paragraph, as being based on a disclosure that does not comply with the enablement requirement of that paragraph. The presently appealed claims are identical to the appealed claims in the prior decision with the exception that an additional dependent claim (i.e., claim 52) has been added.

Appellants' invention pertains to a process for the control of inking in a printing machine (claims 27 through 35, 38 through 44 and 52), a printing plant suitable for the carrying out of that process (claims 36 and 37), and a measuring apparatus for the generation of control data for such a printing plant (claims 45 through 51). The invention is explained on page 7 of the specification as follows:

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In the system known heretofore, regulation of the inking process has been carried out accordingly [sic, according] to densitometric, i.e. opacity, measurements of the printing colors involved . . . . The control of the inking process [by] . . . this known method of inking control is not always fully satisfactory.

According to the present invention, the principle of inking controls regulated by color density is abandoned and replaced by regulation of inking controls based on spectral color measurements and colorimetry.

The following additional explanation of the invention is found on pages 5 and 6 of the main brief:

In standard color coordinate systems, each set of color coordinate values (such as the L, a, b values) represent coordinates which uniquely define the location of a color in a three dimensional color space. In accordance with exemplary embodiments of the present invention, the measured colorimetric coordinates are then compared against reference coordinates to provide a colorimetric deviation. Given that conventional printing machines controlled ink thickness in response to density deviations, exemplary embodiments of Appellants' invention are directed to using an empirically determined

transformation matrix to convert the colorimetric deviation values into density deviation values.

By converting colorimetric deviation values into density deviation values "only the measured value acquisition apparatus needs to be replaced to refit a suitable printing plant for the process according to the present invention" (specification, page 9). Independent claims 27 and 38, copies of which are found in an appendix to appellants' main brief, are representative of the appealed subject matter.

In the prior decision, the merits panel held that the examiner had advanced acceptable reasoning to establish a prima

facie case of lack of enablement with respect to the step of converting color deviations into a corresponding set of standard density deviations, and that appellants had not submitted evidence to rebut the examiner's prima facie case.<sup>2</sup>

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<sup>2</sup>The 35 U.S.C. § 112, first paragraph, rejection of the claims in the previous appeal was based on a number of additional aspects of the claimed invention which the examiner contended were not supported by an enabling disclosure. However, the merits panel sustained the rejection only with

In so holding, the merits panel stated that

our difficulty with appellants' position is not focused upon the mathematics involved [in deriving the transformation matrix] but rather with the basic question of the disclosure's failure to inform one of ordinary skill in the art about the underlying physical relationship between the colorimetric and densitometric data necessary in order to practice the invention. [Prior decision, page 10.]

In an effort to overcome the examiner's prima facie case of lack of enablement, appellants elected to continue prosecution for the purpose of presenting new evidence to support their position that the disclosure as originally filed is sufficient to enable one skilled in the art to achieve the colorimetry data to density data conversion of the invention. Appellants contend that the newly submitted declaration of Tino Celio and its supporting documentation overcomes the examiner's prima facie case because the newly submitted evidence

set[s] forth factual information which unequivocally establishes the level of skill in the art before Appellants' priority date[,] . . . further includes factual information regarding the amount of time and

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respect to the converting step. See pages 5 and 6 of the prior decision.

effort required to practice the claimed invention given Appellants' originally filed disclosure, and therefore confirms that one skilled in the art could have made and used Appellants' invention, based solely on Appellants' disclosure, without undue experimentation. [Main brief, page 11.]

It is the examiner's bottom line position in the present appeal that the newly submitted evidence does not overcome the rejection. See pages 15-17 of the answer.

With respect to the step of converting color deviations into a corresponding set of standard filter density deviations, appellants' specification on pages 10 and 11 informs a person skilled in the art that this may be accomplished by the use of a transformation matrix whose elements are the partial derivatives of the color coordinates with respect to the color density deviations. The specification further informs the skilled artisan that the matrix elements may be determined empirically.

Turning to appellants' newly submitted evidence, it is clear that the "Matrix Algebra For Colorimetrists" publication by Eugene Allen submitted in support of the Celio declaration is very pertinent to the enablement issue before us in that it is not merely directed to the fundamentals of matrix algebra,

but rather to

the application of matrix algebra to solving colorimetric calculations. To the extent that the Allen publication may not be on all fours with the conversion step called for in the present application, it nevertheless indicates to us that a person skilled in the art would have understood that the colorimetric and density data referred to in appellants' specification are linearly related, or at least capable of being reasonably approximated by assuming that they are linearly related. See Allen, page 4, column 1, and page 5, column 1. The Allen publication's discussion on page 5 of using partial derivatives to generate the elements of a conversion matrix further indicates to us that the skilled artisan would have understood how to go about deriving the elements of the transformation matrix when informed by appellants' specification that the elements of the transformation matrix may be empirically derived by taking the partial derivatives of the color coordinates with respect to the color density deviations.

Moreover, given the showing in the Allen publication of the level of skill of those versed in the art of colorimetry, Celio's estimates (declaration, paragraph 18) of how long it would take to perform the actual calculations necessary to derive a suitable transformation matrix, even if overly optimistic, give us reason

to believe that the mathematics involved would not have required an unreasonable amount of time and effort on the part of an ordinarily skilled artisan in order to derive the required matrix transformation.<sup>3</sup> The examiner's concerns (e.g., answer, page 10) regarding the integration of the necessary hardware and software to implement the claimed invention are essentially a rehash of the examiner's position as set forth in the answer in the prior appeal, which was addressed by the panel in the prior decision on page 6

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<sup>3</sup>This view is consistent with the view expressed by the panel in the prior decision on page 10 that their concerns were not focused on the mathematics involved but rather on the underlying physical relationship between colorimetric and densitometric data.



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thereof. We incorporate by reference and reaffirm the conclusions of the panel in the prior appeal in these matters.

While we appreciate that appellants' disclosure may not be as complete as the examiner would like, we conclude that the newly presented evidence is sufficient to overcome the examiner's prima facie case of nonenablement. As stated by the court in *In re Gaubert*, 524 F.2d 1222, 1126, 187 USPQ 664, 667 (CCPA 1975) in quoting from *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972):

To satisfy § 112, the specification disclosure must be sufficiently complete to enable one of ordinary skill in the art to make and use the invention without undue experimentation, although the need for a minimum amount of experimentation is not fatal \* \* \*. Enablement is the criterion, and every detail need not be set forth in the written specification if the skill in the art is such that the disclosure enables one to make the invention. [Citations omitted.]

Such is the case here, in our view.

The decision of the examiner is reversed.

**REVERSED**

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| IAN A.CALVERT               | ) |                 |
| Administrative Patent Judge | ) |                 |
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|                             | ) | BOARD OF PATENT |
| IRWIN CHARLES COHEN         | ) | )               |
| Administrative Patent Judge | ) | APPEALS AND     |
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| LAWRENCE J. STAAB           | ) |                 |
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